CLAIMS:

1. Transmitter (Tx_1, Tx_2) for simultaneously transmitting at least a first (s'_1) and a second (s'_2) signal, the first signal (s'_1) being modulated according to a first modulation constellation, the second signal (s'_2) being modulated according to a second modulation constellation, wherein the transmitter is arranged to pre-code at least the first signal (s'_1) through a modification of the first modulation constellation so as to prevent a correlation between the at least first (s'_1) and second (s'_2) simultaneously transmitted signals.

2. Transmitter (Tx_1, Tx_2) according to claim 1, wherein the pre-coding of at least the first signal (s'_1) comprises a rotation of the first modulation constellation through a first angle.

3. Transmitter (Tx_1, Tx_2) according to claim 1, wherein the pre-coding of at least the first signal (s'_1) comprises a change of the order of the first modulation constellation.

4. Transmitter (Tx_1, Tx_2) according to claim 3, wherein the pre-coding further comprises a change of the number of simultaneously transmitted signals (s'_1, s'2).

5. Transmitter (Tx_1, Tx_2) according to claim 1, wherein the transmitter is arranged to pre-code at least the first (s'_1) signal after receipt of a first signal from a receiver (Rx_1, Rx_2) of the at least first (s'_1) and second (s'_2) simultaneously transmitted signals.

6. Transmitter (Tx_1, Tx_2) according to claim 1, wherein the transmitter is arranged to transmit a second signal to a receiver (Rx_1, Rx_2) of the at least first (s'_1) and second signals (s'_2) in order to notify the receiver about the pre-coding of at least the first (s'_1) signal.

7. Transmitter (Tx_1, Tx_2) according to claim 1,2,3 and 4, wherein the first and second modulation constellations are M-ary QAM modulation constellations.

8. Receiver (Rx_1, Rx_2) for simultaneously receiving at least a first (s'_1) and a second (s'_2) signal from a transmitter (Tx_1, Tx_2), the first received signal (s'_1) being modulated according to a first modulation constellation, the second received signal (s'_2) being modulated according to a second modulation constellation, in which at least the first received signal (s'_1) is pre-coded through a modification of the first modulation constellation so a to prevent a correlation between the at least first (s'_1) and second (s'_2) simultaneously received signals.

9. Receiver (Rx_1, Rx_2) according to claim 8, wherein the pre-coding of the first (s'_1) received signal comprises a rotation of the first modulation constellation.

10. Receiver (Rx_1, Rx_2) according to claim 8, wherein the pre-coding of the first (s'_1) received signal comprises a change of the order of the first modulation constellation.

11. Receiver (Rx_1, Rx_2) according to claim 8, wherein the pre-coding further comprises a change of the number of simultaneously received signals (s'_1, s'2).

12. Receiver (Rx_1, Rx_2) according to claim 8, wherein the receiver is arranged to transmit a first signal to the transmitter in a response to which the transmitter is arranged to pre-code at least the first (s'_1) signal.

13. Receiver (Rx_1, Rx_2) according to claim 8, wherein the receiver is arranged to receive a second signal from the transmitter (Tx_1, Tx_2) in a response to the transmitter pre-coding at least the first (s'_1) signal.

14. Receiver (Rx_1, Rx_2) according to claim 8,9, 10 and 11, wherein the first and second modulation constellations are M-ary QAM modulation constellations.

15. Transceiver comprising a transmitter according to claim 1.

16. Transceiver according to claim 15, further comprising a receiver according to claim 8.

17. Wireless device comprising a transmitter according to claim 1.

18. Telecommunication system comprising a transmitter according to claim 1.